

# MERCER

Investment Consulting

February 20, 2004

## **Total Fund Review – Fourth Quarter Board Meeting**

### Arizona State Retirement System

**Terry A. Dennison**

Los Angeles



Marsh & McLennan Companies



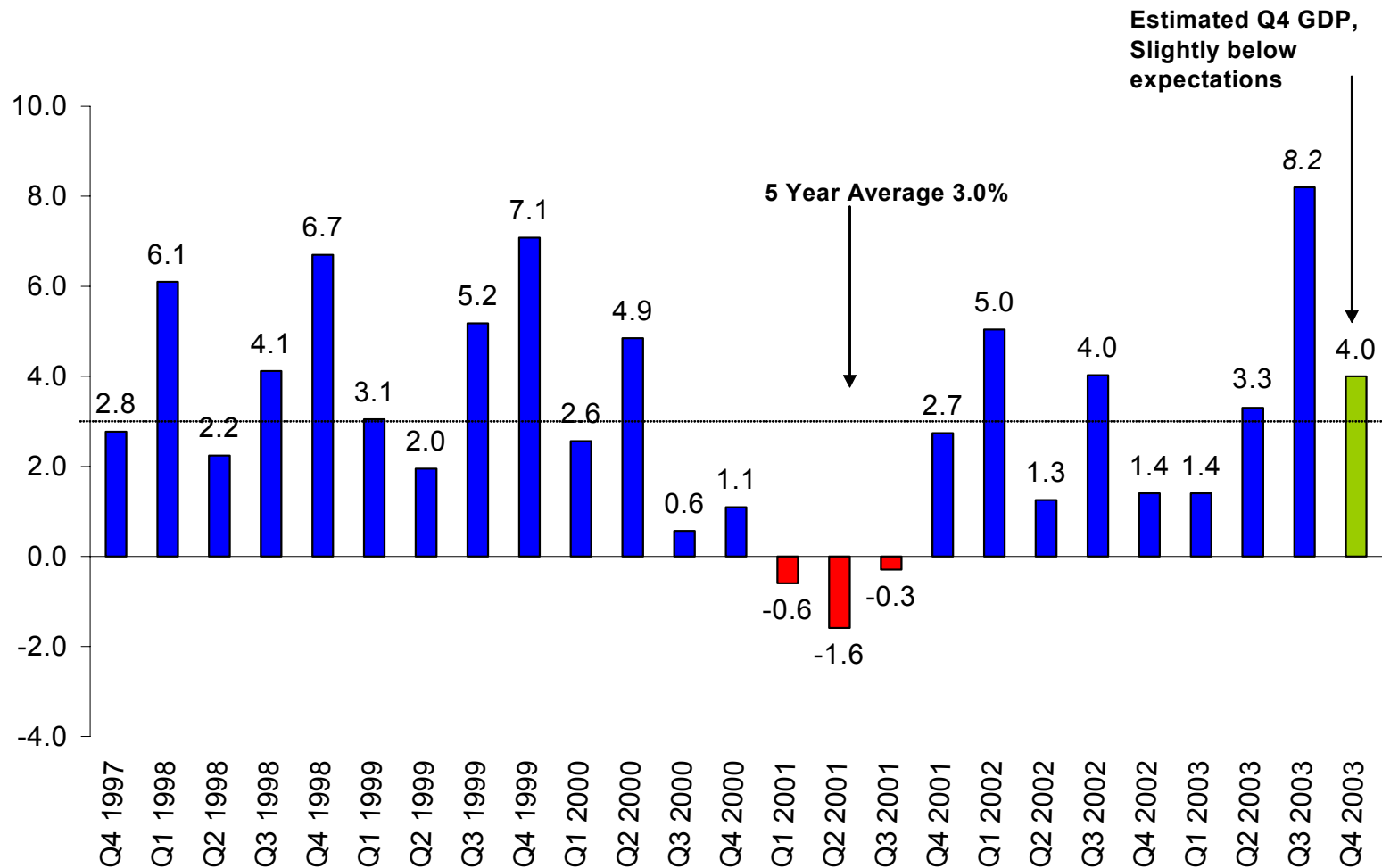
# **Economic Environment**



## **Mostly Positive Economic News Heralds The New Year; Some Caution Remains**

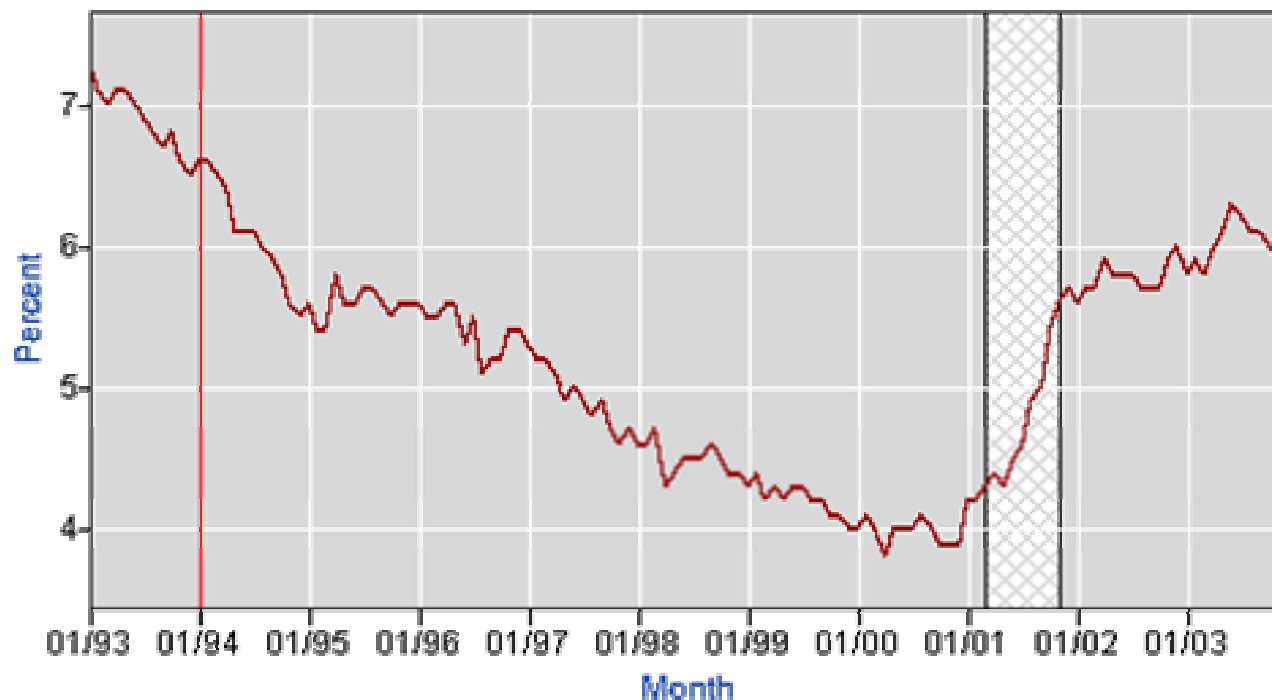
- Third quarter GDP was revised up from initial reports of 7.2% annualized growth to 8.2% for third quarter
- Fourth quarter estimated GDP was reported to be 4.0%, slightly below expectations
- Elevated terrorism alerts remind us that despite improved economic news, terrorist activity could thwart a recovery
- The U.S. dollar continued to decline resulting in strong currency gains for international equities and good news for U.S. exporters

# Gross Domestic Product Growth Declines from 3Q03 Pace But Is Still Above Long Term Average



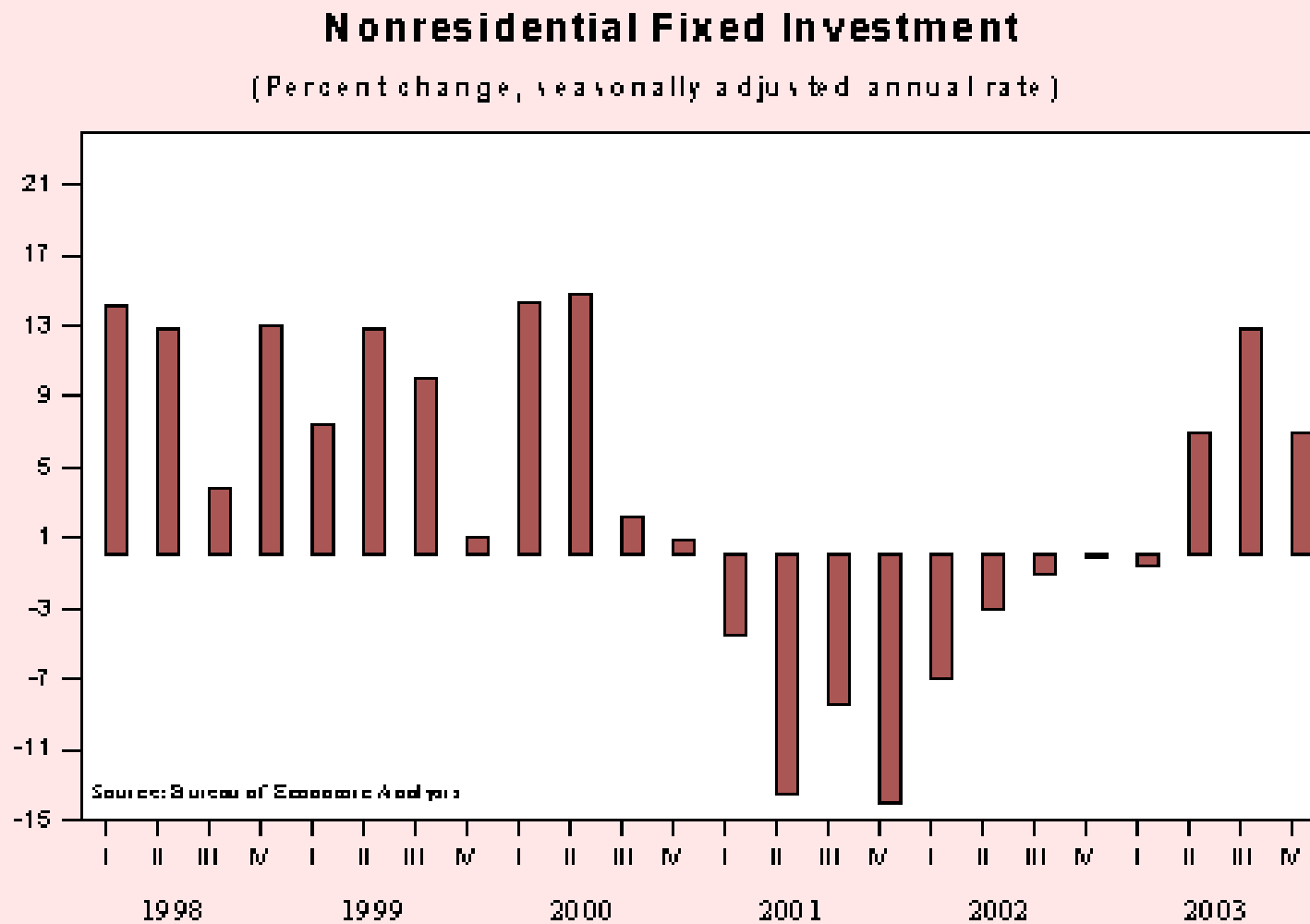
# Unemployment Rate Continues to Decline 'Jobs Recovery' May Be Beginning

Unemployment rate (seasonally adjusted)



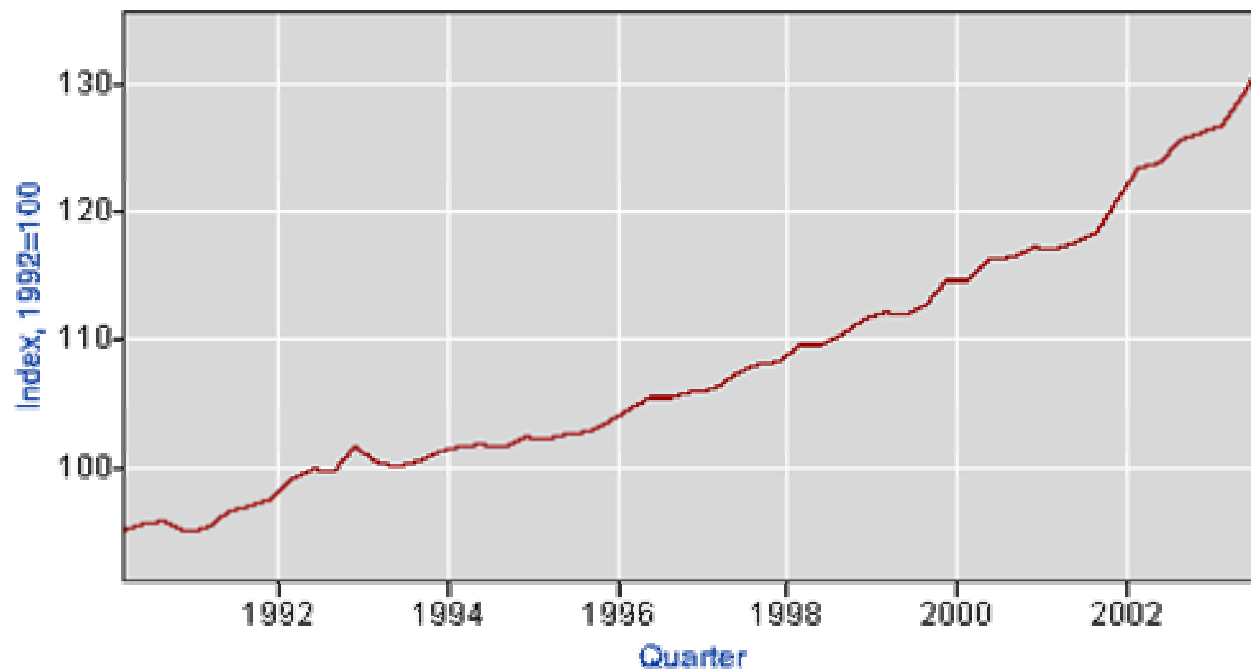
Note: Cross-hatched area represents recession. Vertical line indicates a break in series in January 1994 due to redesign of the survey.

# Business Investment Continues to Show Improvement



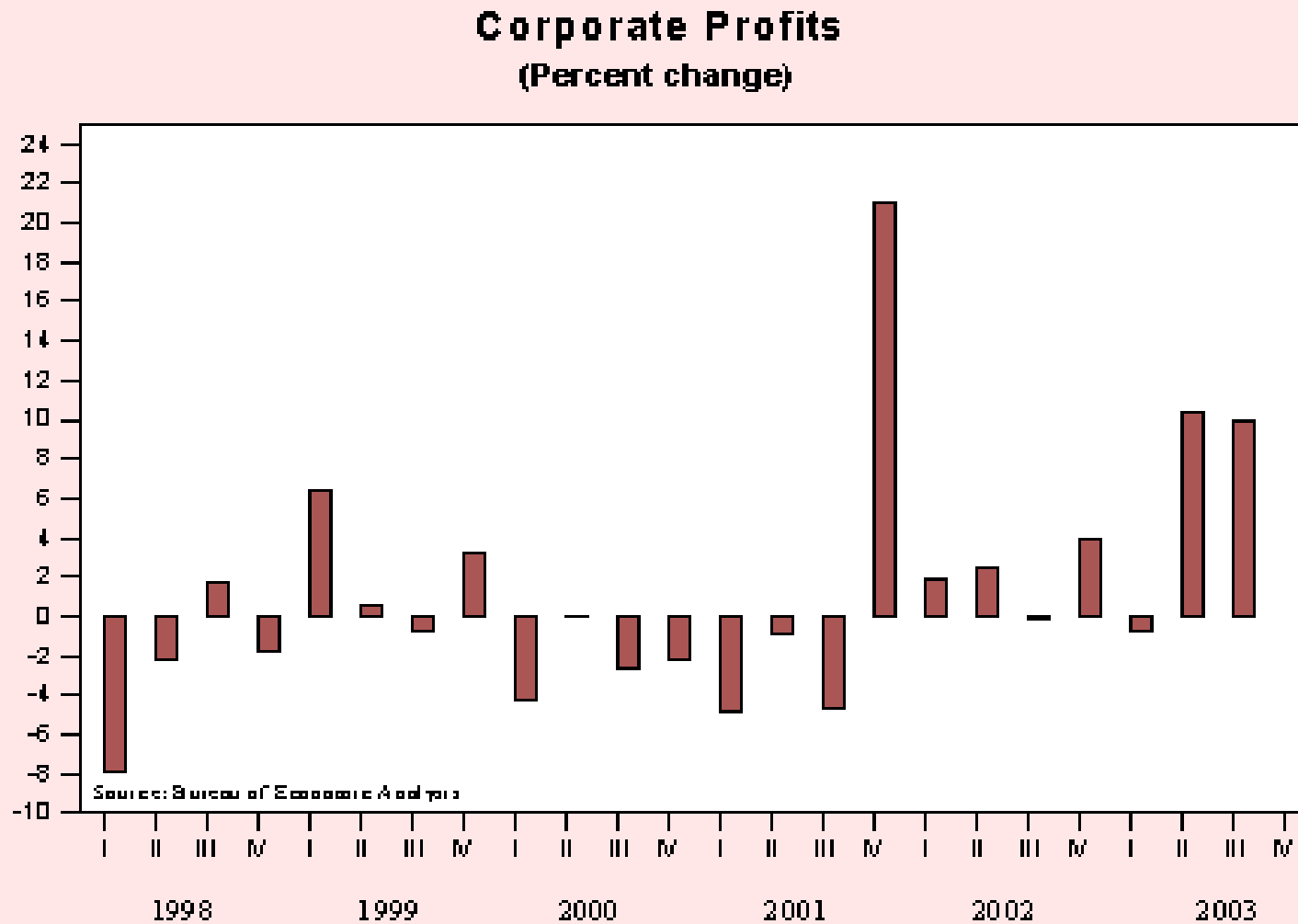
# Productivity Increases Continue to Accelerate

Quarterly productivity in the nonfarm business sector



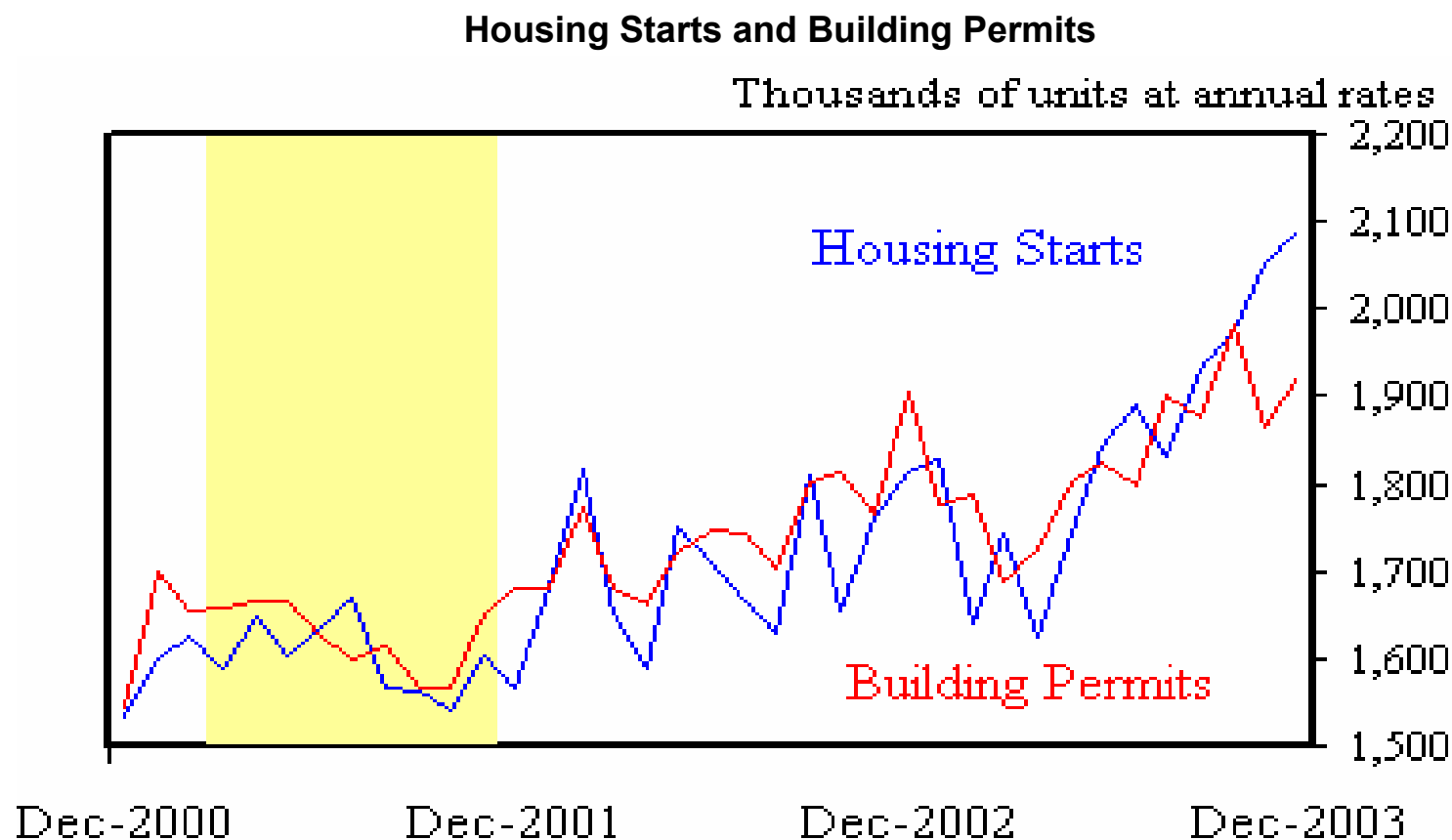
Note: Labor productivity is output per hour worked

# Corporate Profits Extend Upward Trend

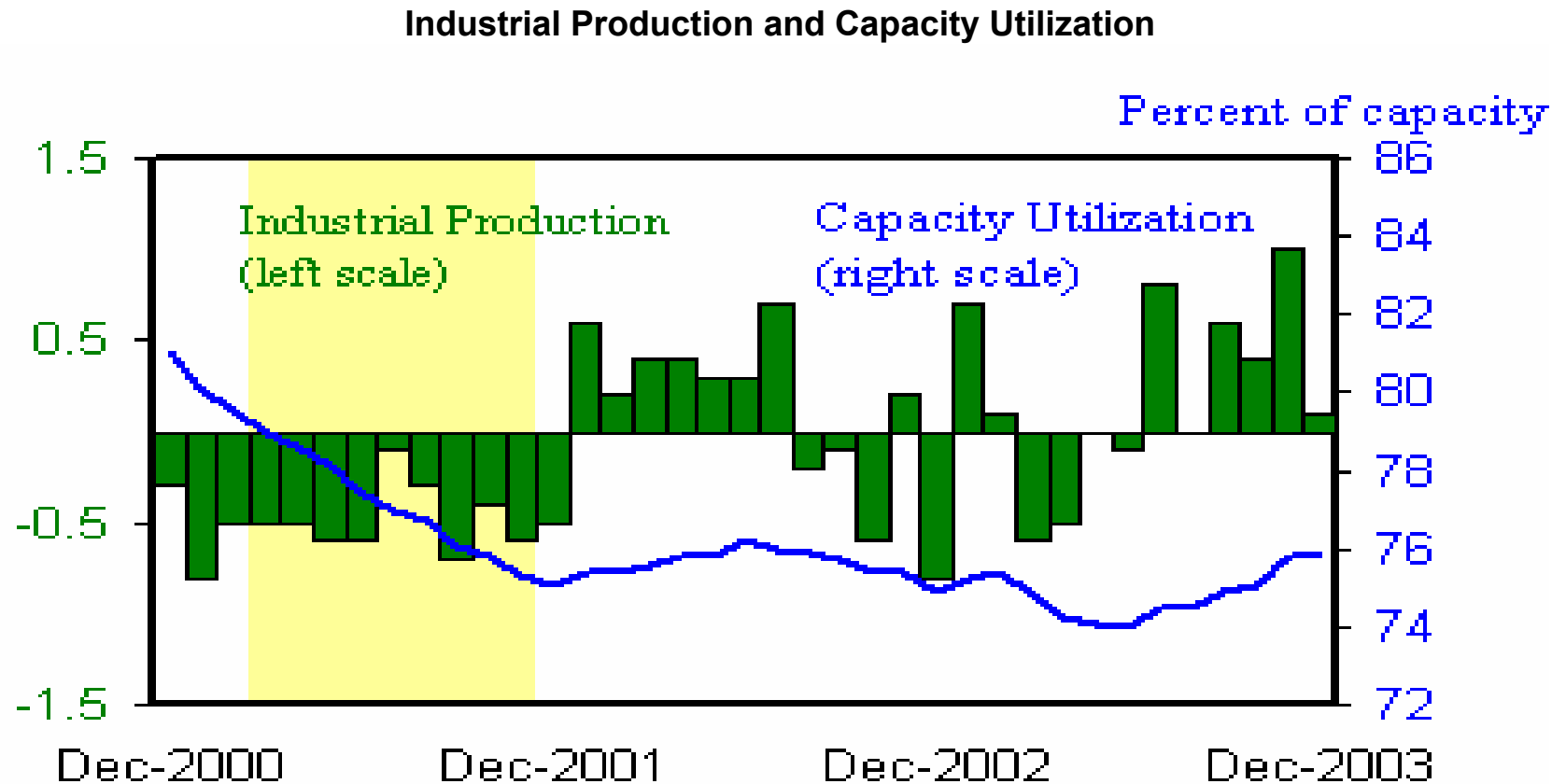




# Housing Starts Surged In November And December To The Highest Levels In Many Years



## Capacity Utilization Has Begun to Rise Industrial Production is Also Improving

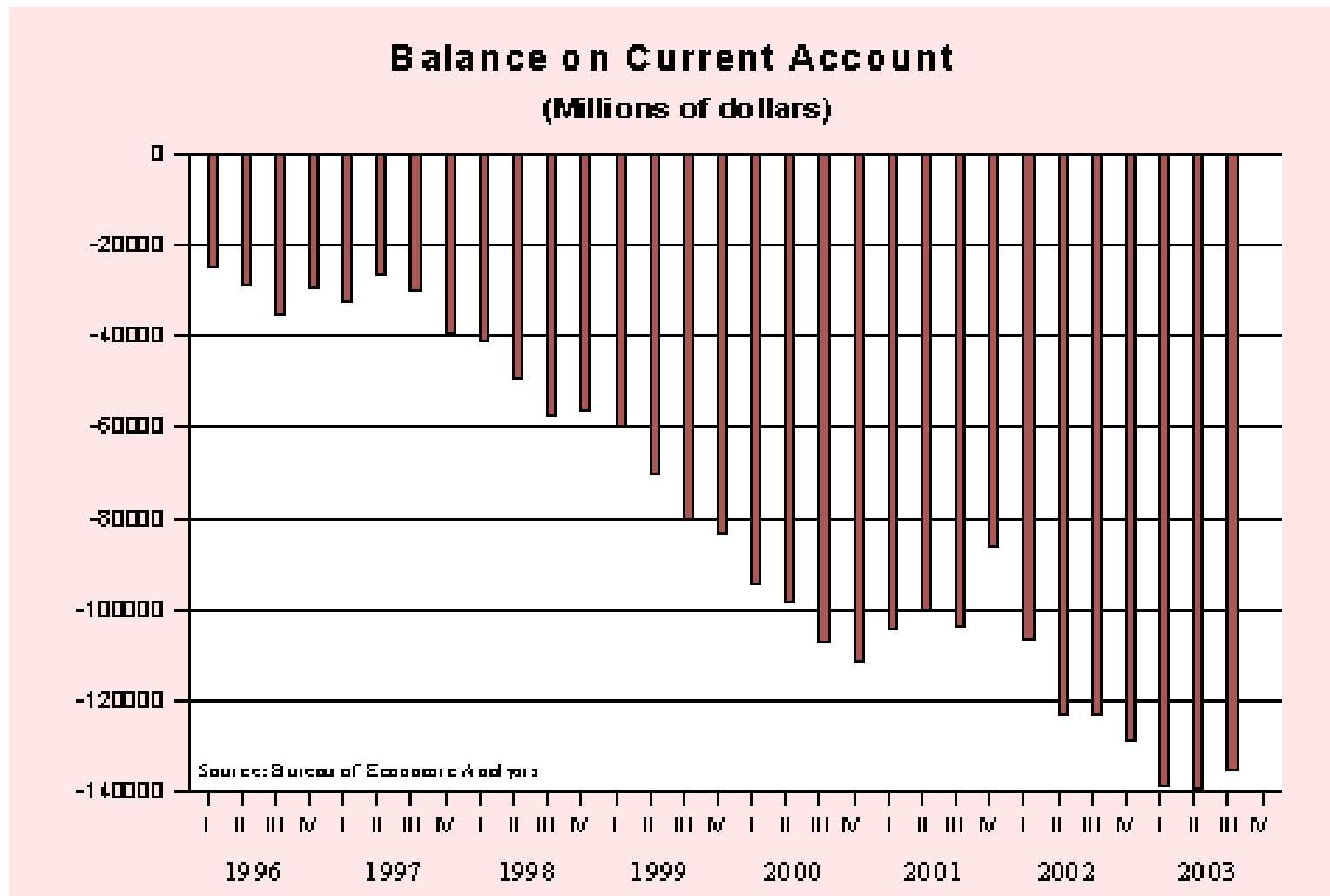




## **There are Negatives to be Concerned About**

- Mounting consumer debt
- High debt levels for state and federal governments
- Despite lower unemployment figures, job growth continues to be weak
- Specter of inflation
  - Massive fiscal stimulus, \$500bn deficit
  - Continued high levels of money supply growth
  - Falling dollar increases inflationary impact of price-insensitive imports
  - Fed maintaining low real short term rates well into the recovery
  - Soaring commodity prices including gold

# Current Account Deficit is Now About 5% of GDP



# The Falling Dollar

## ■ Early Predictions

- Several years ago, many economists and financial experts expected a dollar decline
- Over the past year, the dollar has declined by over 25% against the major currencies

## ■ The Good News

- The dollar's decline helps U.S. exporters as U.S. goods sold abroad are less expensive
- Who might be the greatest beneficiaries? -- Companies whose revenues from foreign sales are the highest in their respective industry sectors such as General Motors (Auto & Parts), AON (Insurance), Bristol Myers (Pharmaceuticals), Coca-Cola (Beverage), Alcoa (Steel, other materials)<sup>1</sup>

## ■ The Bad News

- Foreign goods become more expensive to Americans
- If prices of imports rise, domestic products may also rise giving way to higher inflation
- Signs of inflation will put pressure on interest rates as investors demand extra return for lost future purchasing power
- Government deficits combined with higher interest rates are detrimental to economic growth and stability

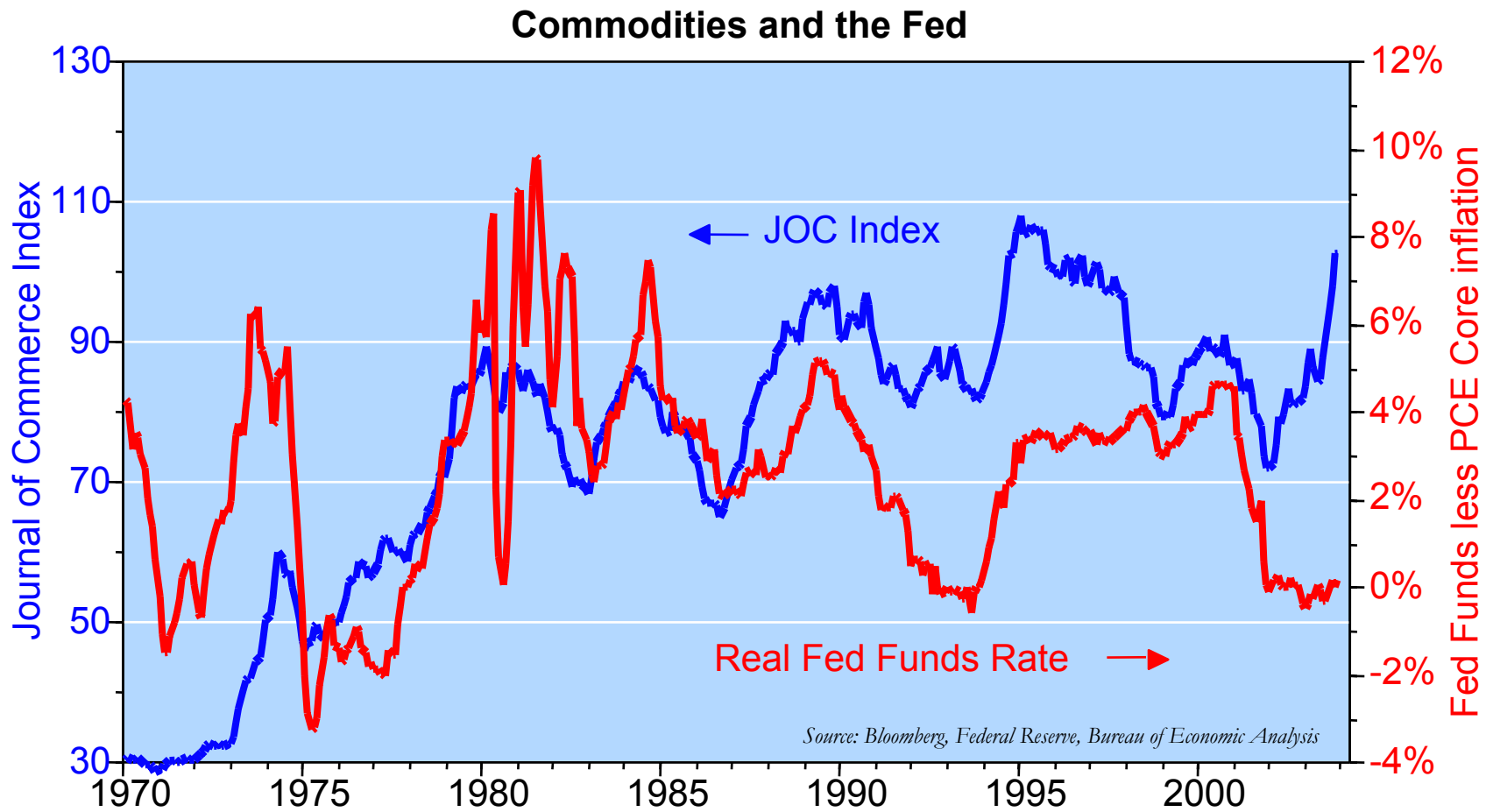
## ■ Implications for Higher Interest Rates

- Higher interest rates may short circuit the recovery and make corporations' costs higher
- Higher interest rates may subdue the stock and bond markets and impact the housing market which has been robust
- Higher interest rates may also reduce pension liabilities which could give some relief to underfunded pension plans

<sup>1</sup> Bridgewater Daily Observations January 22, 2004



# Fed's Inaction May Allow Inflation to Develop





# **Securities Markets**

## **U. S. Equity Markets**

### Overview

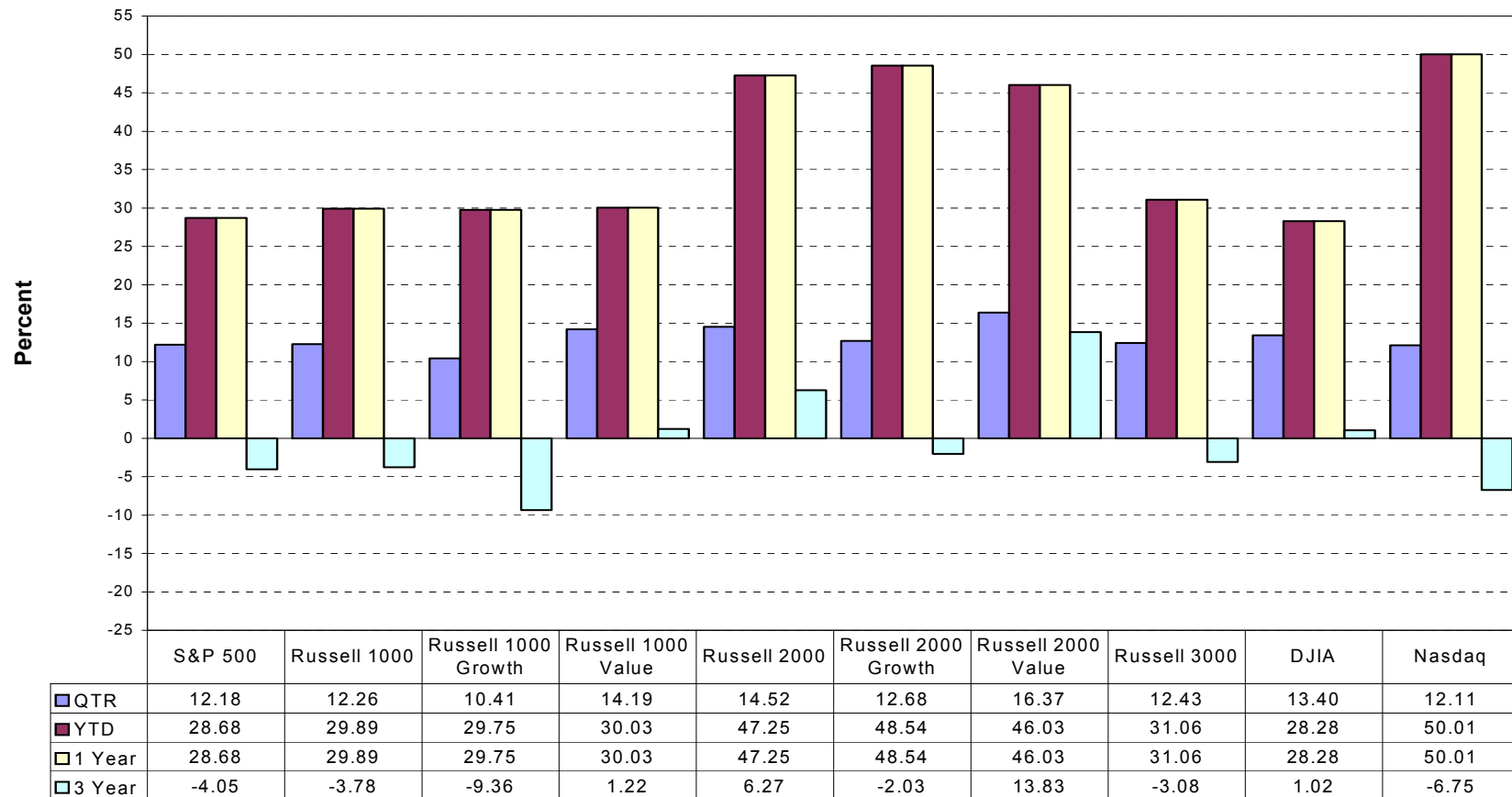
- Investors continued to prefer small capitalization stocks during the quarter; Value stocks outpaced growth stocks in both the large and small cap segments of the market
- The S&P 500 produced a 12.2% gain for the quarter and ended the year with the strongest gain since 1997, up 28.7%
- While all industries posted gains for the quarter, economically and inflation sensitive issues such as materials, industrials and energy fared best; companies with more solid balance sheets and predictable earnings produced weaker gains



# U. S. Equity Markets

## Index Performance

Domestic Equity Returns



Source: Datastream

## Excellent Returns for Every Segment of the Market

- Value outperformed core and growth for all cap ranges
- Small value continued to provide superior returns

4Q03 Returns	Value	Core	Growth
<b>Large</b>	<b>14.19</b>	<b>12.26</b>	<b>10.41</b>
<b>Mid</b>	<b>15.22</b>	<b>13.97</b>	<b>12.17</b>
<b>Small</b>	<b>16.37</b>	<b>14.52</b>	<b>12.68</b>
Note: Russell 1000, Mid-Cap, 2000 Indices; Value, Total, Growth			

## One-Year Returns Are Excellent

- All segments generated returns in the range of +30% to +50%
- Small caps did extraordinarily well with growth up nearly 50%

1 Year Returns	Value	Core	Growth
Large	30.03	29.89	29.75
Mid	38.07	40.08	42.71
Small	46.03	49.25	48.54
Note: Russell 1000, Mid-Cap, 2000 Indices; Value, Core, Growth			

## Three-Year Results Are Showing Solid Improvement

- Returns now positive for all but growth and large-core
- Growth losses are now less than -10% for all cap sizes

3 Year Returns	Value	Core	Growth
Large	1.22	-3.78	-9.36
Mid	8.48	3.48	-6.13
Small	13.83	6.27	-2.03
Note: Russell 1000, Mid-Cap, 2000 Indices; Value, Total, Growth			

## Cumulative Three-Year Returns Improved But Still Negative for Growth

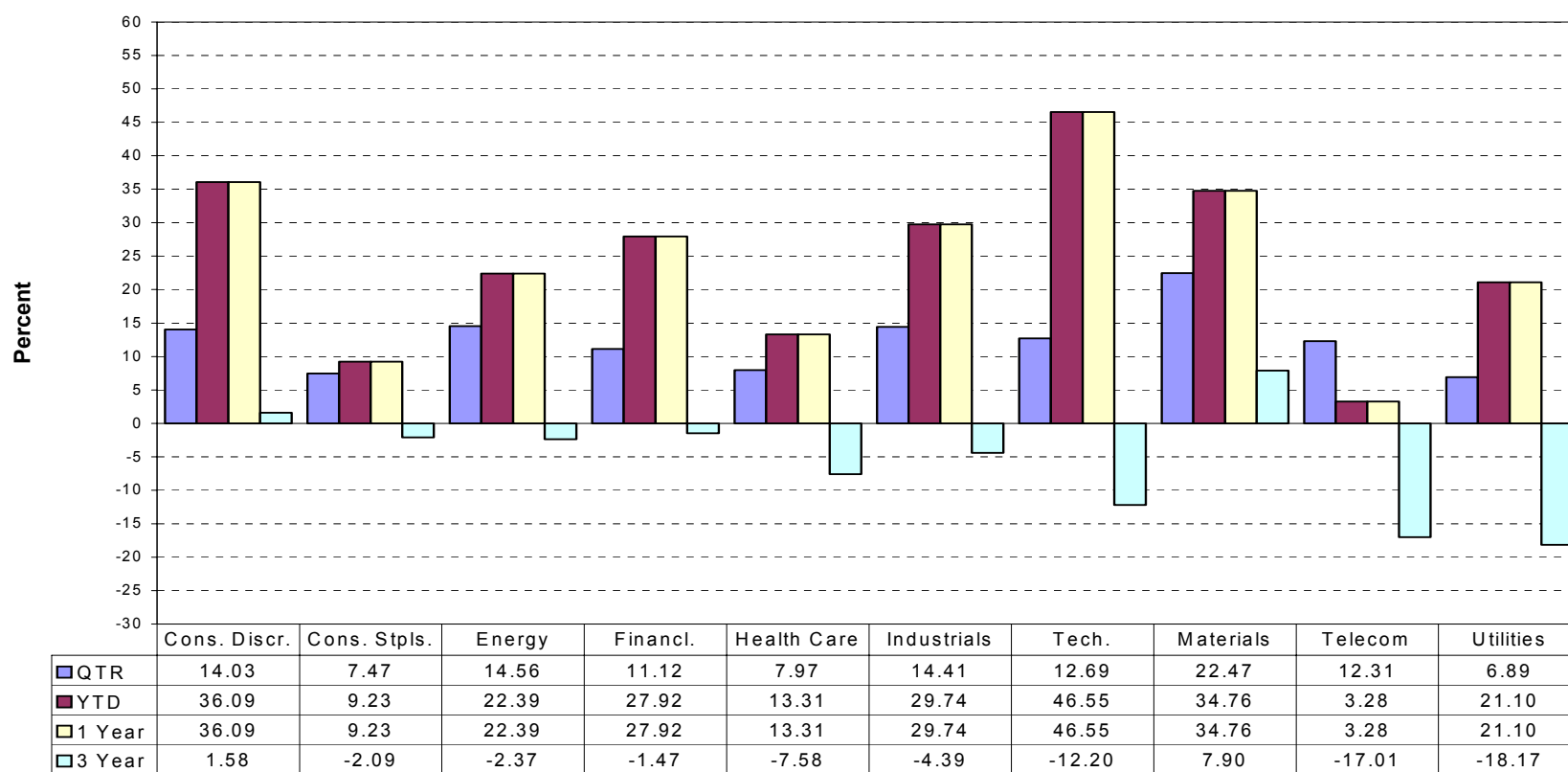
- Despite recovery, large growth fell more than 25%
- Small value stocks increased by more than 47%

Cumulative 3 Yr	Value	Core	Growth
Large	3.70	-10.92	-25.53
Mid	27.66	10.81	-17.29
Small	47.49	20.01	-5.97
Note: Russell 1000, Mid-Cap, 2000 Indices; Value, Total, Growth			

# U. S. Equity Markets

## Sector Returns

S&P 500 Returns by Sector



Source: Datastream

# U. S. Equity Markets

## Top Positive and Negative Contributors

S&P 500 Fourth Quarter Return: 12.18%

### 25 Largest Positive Contributors to the S&P 500

### 25 Largest Negative Contributors to the S&P

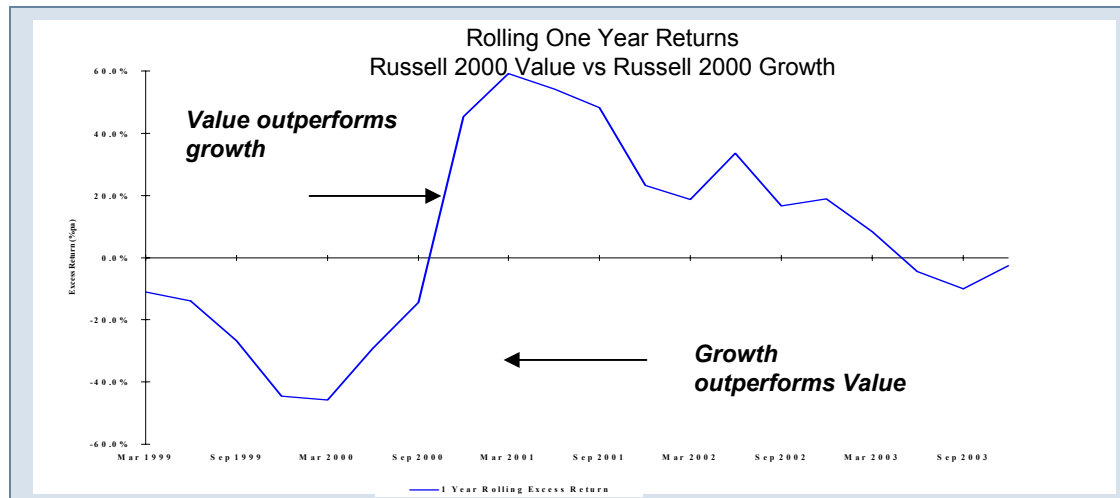
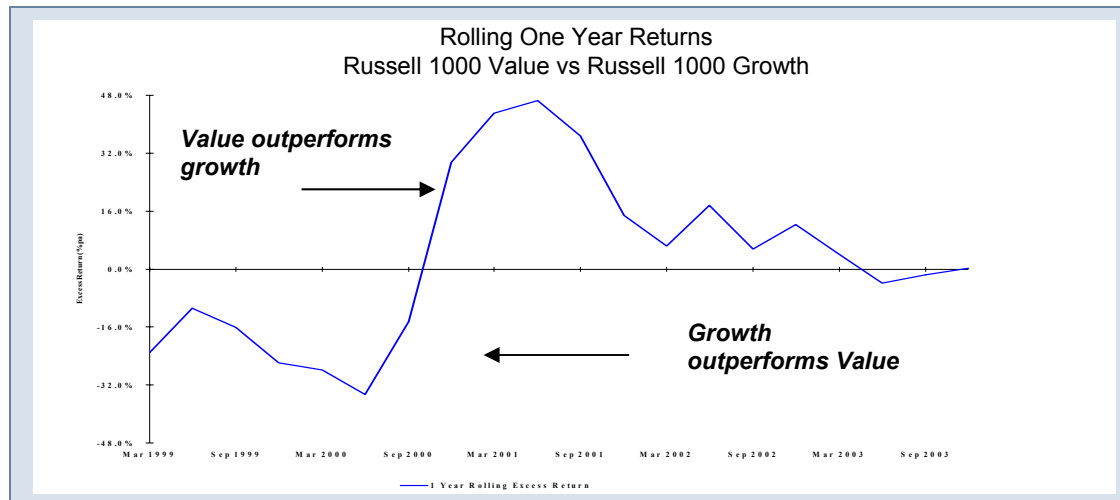
Stock	Return (%)	End of Quarter Weight	End of Quarter Rank	Prior Qtr Rank	Stock	Return (%)	End of Quarter Weight	End of Quarter Rank	Prior Qtr Rank
PFIZER INC	16.79%	2.63%	4	5	WAL MART STORES INC	-4.69%	2.24%	6	3
CISCO SYS INC	23.69%	1.63%	9	11	MERCK & CO INC	-8.00%	1.01%	16	14
EXXON MOBIL CORP	12.70%	2.64%	3	4	WYETH	-7.42%	0.55%	41	33
INTEL CORP	16.53%	2.04%	7	7	AMGEN INC	-4.23%	0.78%	26	20
ALTRIA GROUP INC	25.80%	1.08%	15	17	COLGATE PALMOLIVE CO	-10.02%	0.26%	87	65
AMERICAN INTL GROUP INC	14.98%	1.69%	8	9	MICROSOFT CORP	-0.97%	2.89%	2	1
COCA COLA CO	18.65%	1.21%	13	15	KOHL'S CORP	-16.00%	0.15%	146	108
CITIGROUP INC	7.43%	2.44%	5	6	MEDIMMUNE INC	-23.16%	0.06%	323	238
CHEVRONTXACO CORP	21.93%	0.90%	19	22	SOUTHWEST AIRL CO	-8.79%	0.12%	181	143
FLEETBOSTON FINL CORP	45.94%	0.45%	50	61	AT&T CORP	-4.70%	0.16%	139	114
SBC COMMUNICATIONS INC	18.89%	0.84%	21	23	FAMILY DLR STORES INC	-9.86%	0.06%	325	278
GENERAL ELEC CO	4.60%	3.04%	1	2	SCIENTIFIC ATLANTA INC	-12.33%	0.04%	396	362
WELLS FARGO & CO NEW	15.22%	0.96%	17	18	GENERAL MLS INC	-3.18%	0.16%	131	111
TIME WARNER INC	19.06%	0.79%	23	29	SLM CORP	-2.85%	0.17%	128	110
3M CO	23.58%	0.65%	35	40	SAFEWAY INC	-4.49%	0.09%	238	195
LILLY ELI & CO	18.96%	0.77%	27	31	AT&T WIRELESS SVCS INC	-2.32%	0.18%	117	104
UNITED PARCEL SERVICE INC	17.24%	0.82%	22	25	APARTMENT INVT & MGMT CO	-10.82%	0.03%	435	392
TYCO INTL LTD NEW	29.77%	0.52%	44	46	AUTOZONE INC	-4.83%	0.07%	287	250
US BANCORP DEL	25.14%	0.56%	40	43	MONSTER WORLDWIDE INC	-12.93%	0.02%	457	430
TEXAS INSTRS INC	28.95%	0.50%	47	51	GATEWAY INC	-18.73%	0.01%	485	472
HEWLETT PACKARD CO	19.06%	0.68%	33	34	APPLERA CORP	-6.98%	0.04%	391	359
VIACOM INC	16.03%	0.76%	28	30	MCKESSON CORP	-3.21%	0.09%	242	212
ALCOA INC	45.83%	0.32%	68	87	ALLERGAN INC	-2.32%	0.10%	229	193
ORACLE CORP	17.60%	0.67%	34	35	BIG LOTS INC	-10.12%	0.02%	478	471
QUALCOMM INC	29.59%	0.42%	55	59	DELTA AIR LINES INC DEL	-11.20%	0.01%	486	474

Data Source: Compustat

Report Date: January 28, 2004

Utilities	Cons. Non Durables/Services	Cap Goods	Financials	Health Care	Basic Inds	Info. Tech	Energy	Cons Durables	Transportation
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# Growth vs. Value is Now About Neutral





## **Non-U. S. Equity Markets**

### **Euro Countries Gain Significant Ground in Q4; Dollar Slide Boosts Returns**

- International equities outperformed the U.S. market for the year with the MSCI EAFE gaining 39.2% vs. the S&P 500 gain of 28.7%
- Despite weak economic data in France and Germany, the Dollar's weakness versus the Euro propelled France and Germany stock market returns to 22.5% and 31.3% respectively for the quarter
- Japan had a weak quarter relative to other countries, gaining a modest 8.4%
- The dollar's decline added an additional 13% to 28% to many local market gains. The MSCI EAFE gained 8% in local currency with an additional 18% due to the currency effect

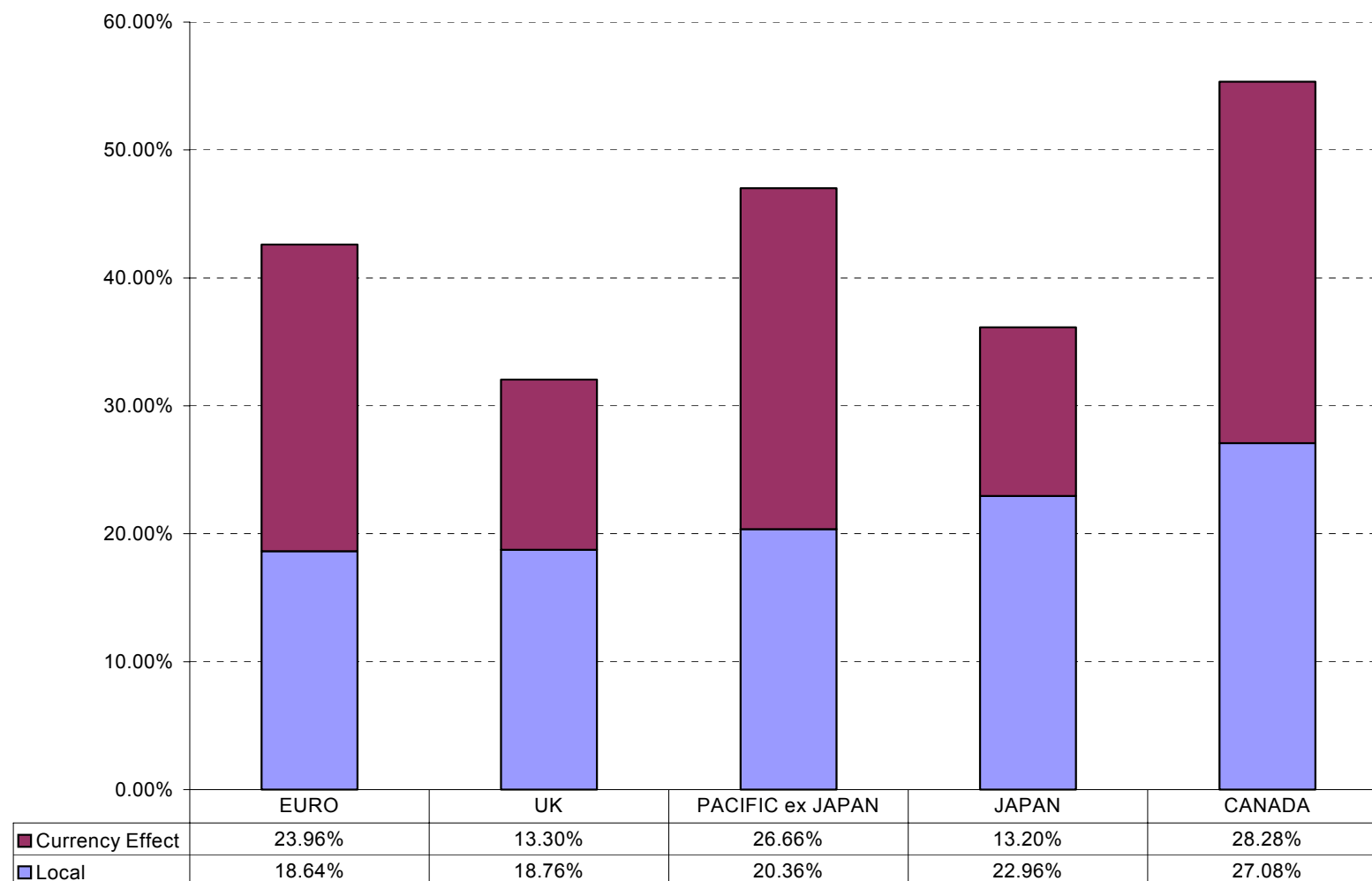
# Non-U. S. Equity Markets

## EAFE Regional Performance



# Non-U. S. Equity Markets

Currency Impact is a Significant Component of Returns



# Fixed Income Markets

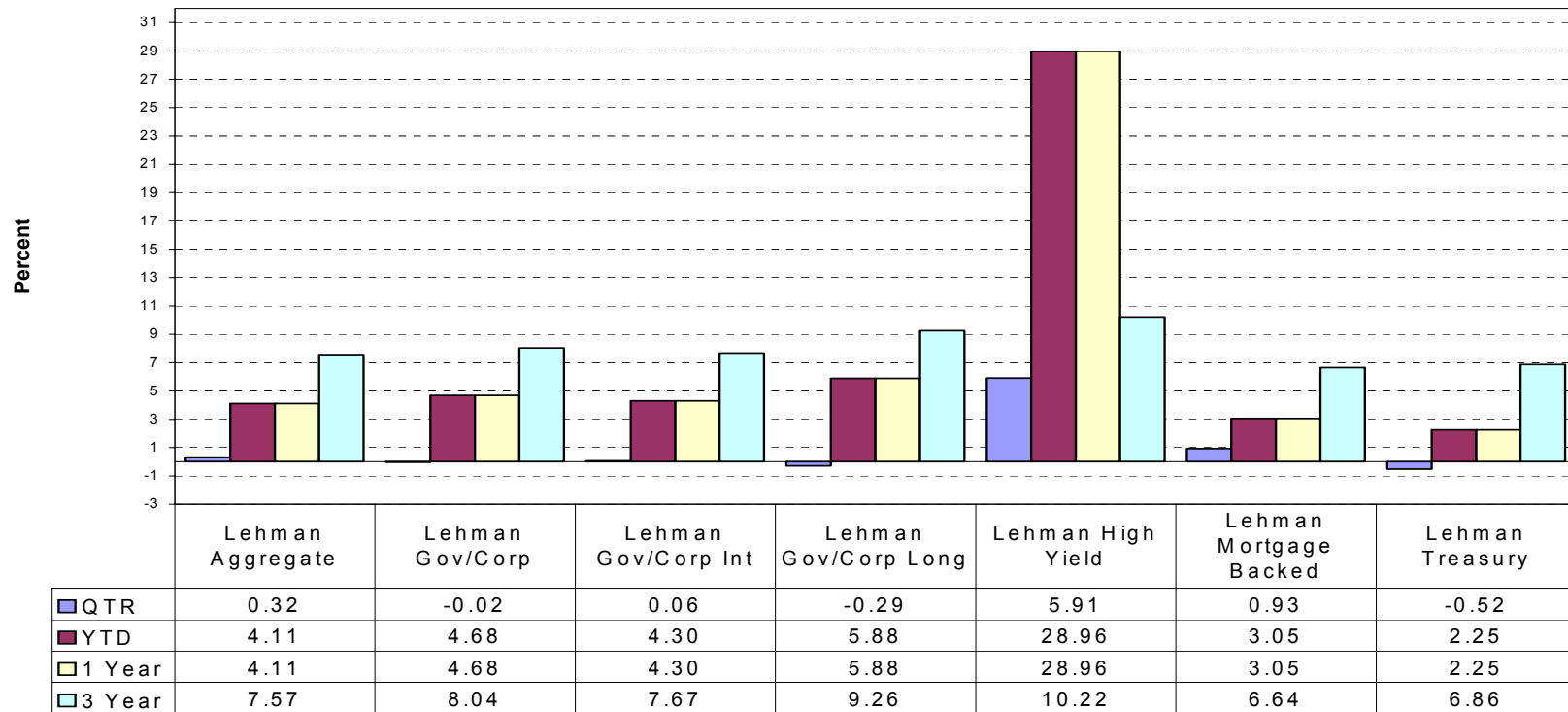
## Overview

- Credit issuers continued to outperform U.S. Governments
- The Lehman Brothers Aggregate Index gained a modest 0.3% for the quarter and 4.1% for the year
- Higher interest rates during October led to fourth quarter losses for U.S. Treasuries
- Corporate spreads have narrowed significantly which will make it difficult for managers to find value in this sector
- High yield continued to outperform with a 5.9% fourth quarter gain and a 29.0% gain for the year
- Moody's downgrade/upgrade ratio fell to 3.75x during the final quarter compared to 7.57x in the first quarter, signaling renewed corporate health

# Fixed Income Markets

## High Yield Has Equity-Like Returns as Spreads Narrow

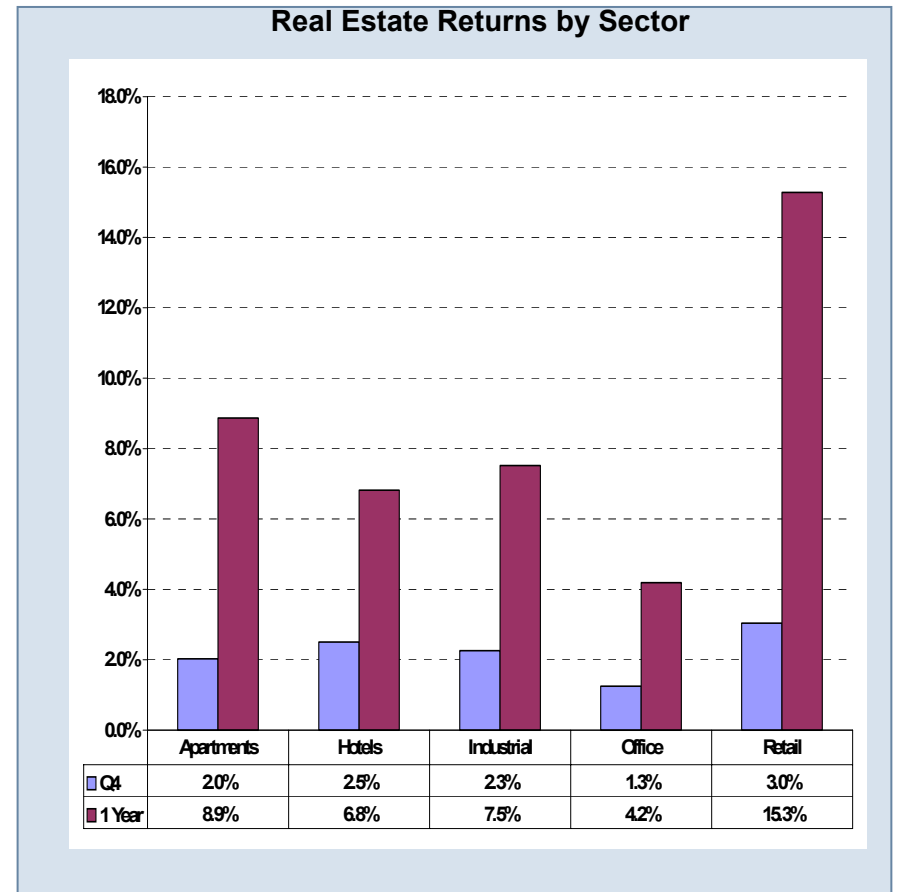
Domestic Fixed Returns



Source: Datastream

# Real Estate

- Real estate posts gains in 2003 but lags domestic equity markets
- Direct real estate posted a modest 2% gain in the trailing quarter and 7.8% for the past four quarters
- Retail properties and apartments were the most successful segments of the market during the year



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# **ASRS Total Fund Performance**

# Total Fund Performance

## For Periods Ending December 31, 2003

	<u>Quarter</u>	<u>1 Year</u>	<u>3 Years</u>	<u>5 Years</u>	<u>Inception</u>
Total Fund	10.0%	24.9%	1.1%	3.5%	11.0%
Benchmark*	9.5	22.9	0.2	2.0	9.3
R/M Public Funds Median	9.3	24.3	2.2	4.8	—
Percentile Ranking	15	34	82	87	

\* Interim Benchmark of 56% S&P 500/28% LB Aggregate/16% EAFE, which incorporates a proration of 6% real estate.

### Policy History:

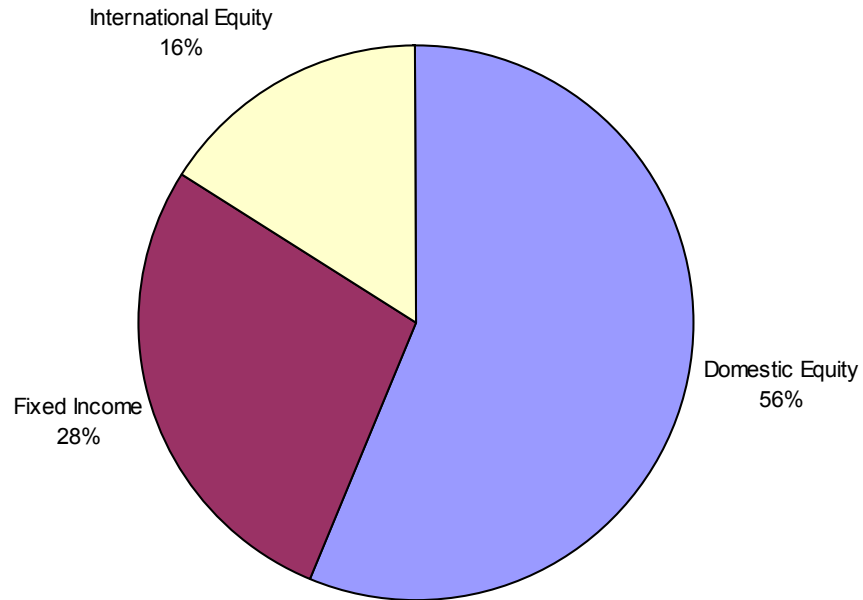
- 1/1/89-12/31/91 – 60% S&P 500/40% LB Aggregate
- 1/1/92-12/31/94 – 50% S&P 500/40% LB Aggregate/10% EAFE
- 1/1/95-6/30/97 – 45% S&P 500/40% LB Aggregate/15% EAFE
- 7/1/97-12/31/99 – 50% S&P 500/35% LB Aggregate/15% EAFE
- 1/1/00-9/30/03 – 53% S&P 500/30% LB Aggregate/17% EAFE
- 10/1/03-present – 53% S&P 500/26% LB Aggregate/15% EAFE/6% Real Estate (Benchmark TBD)



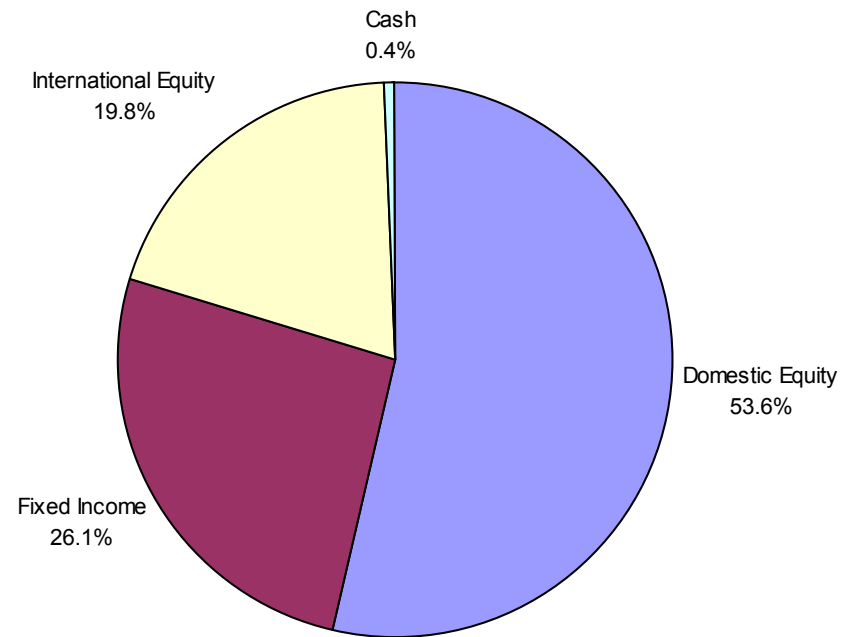
# Total Fund Asset Allocation

## December 31, 2003

**Policy Adjusted for Transition to Real Estate**



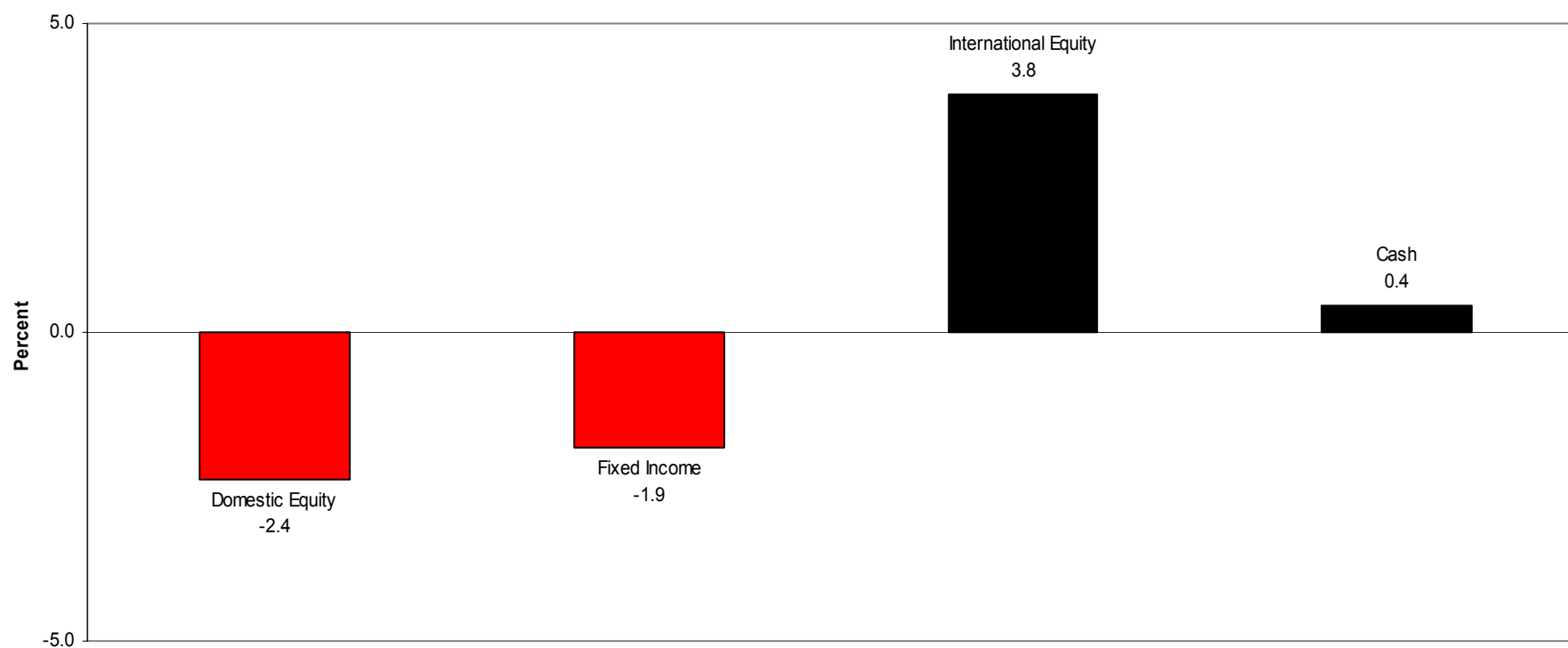
**Actual Allocation**



# Total Fund Asset Allocation

## December 31, 2003

### Asset Allocation vs. Policy Adjusted for Transition to Real Estate



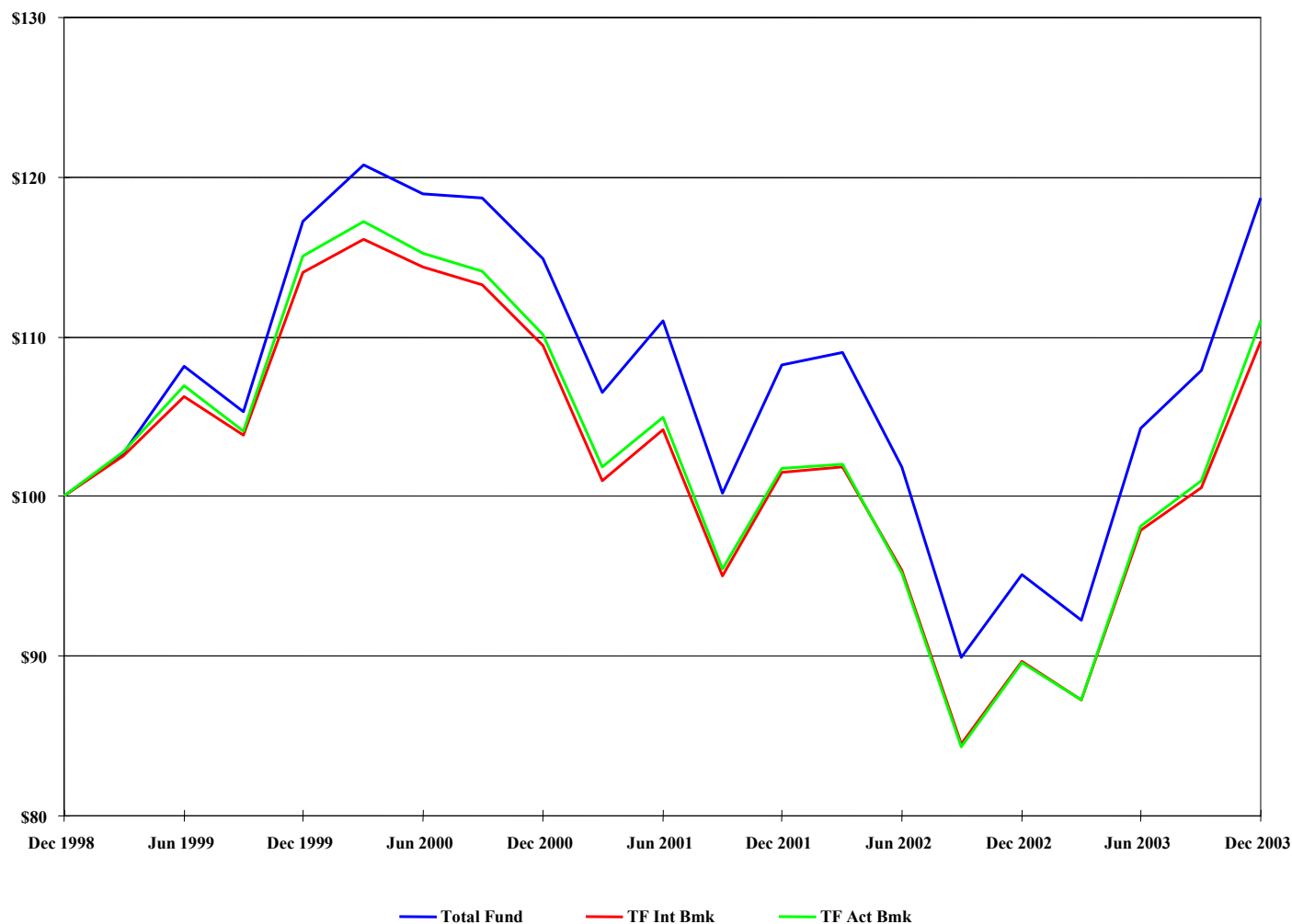
# **Total Fund Performance**

## For the Year Ending December 31, 2003

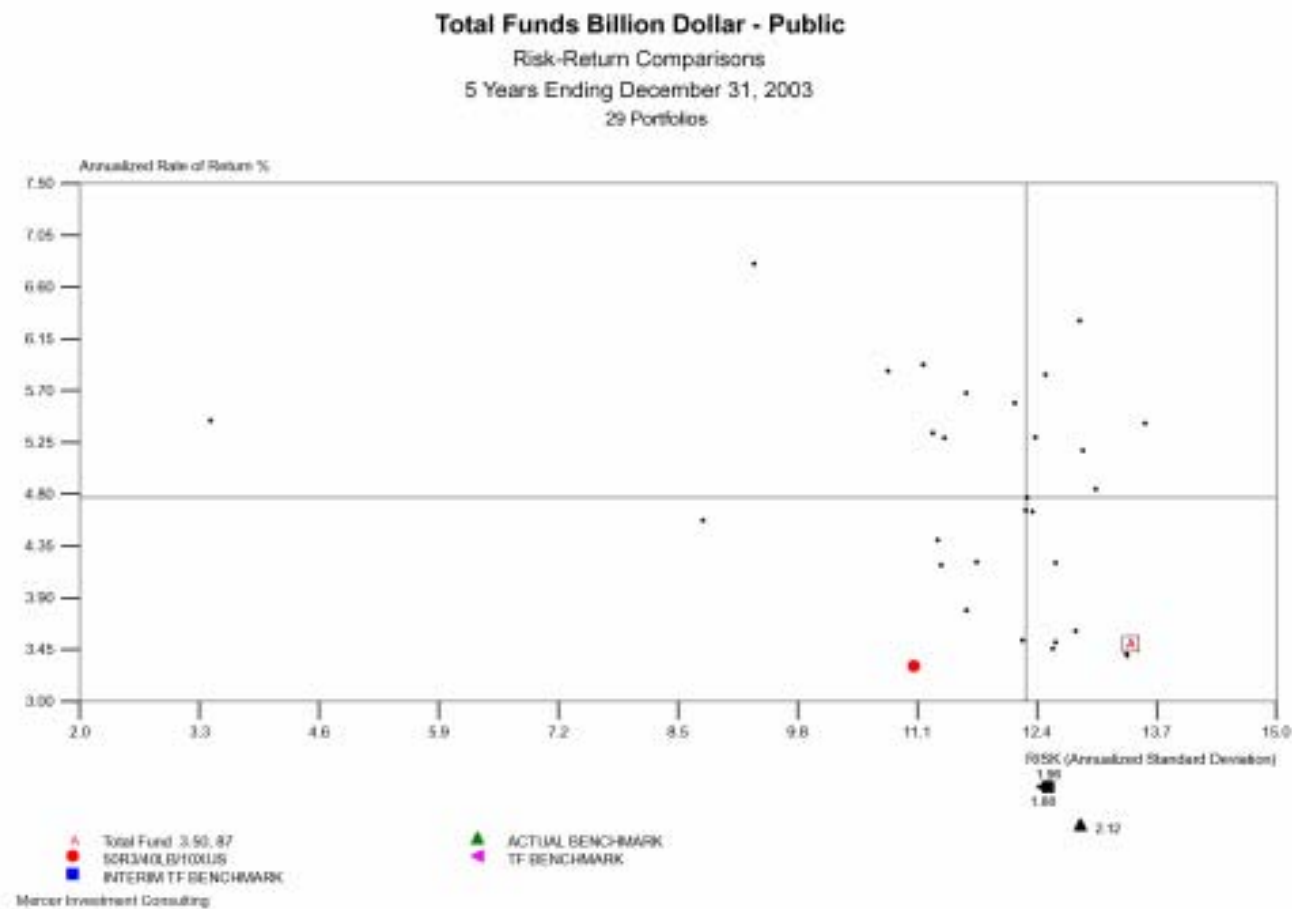
- Measured against:
  - Asset Allocation Target of 8.5% Annually
    - Total Fund has outperformed by 16.4%
  - Inflation + 3.0% annually
    - Total Fund has outperformed by 20.0%
  - Actuarial assumption rate of 8.0% annually
    - Total Fund has outperformed by 16.9%

# Total Fund Growth

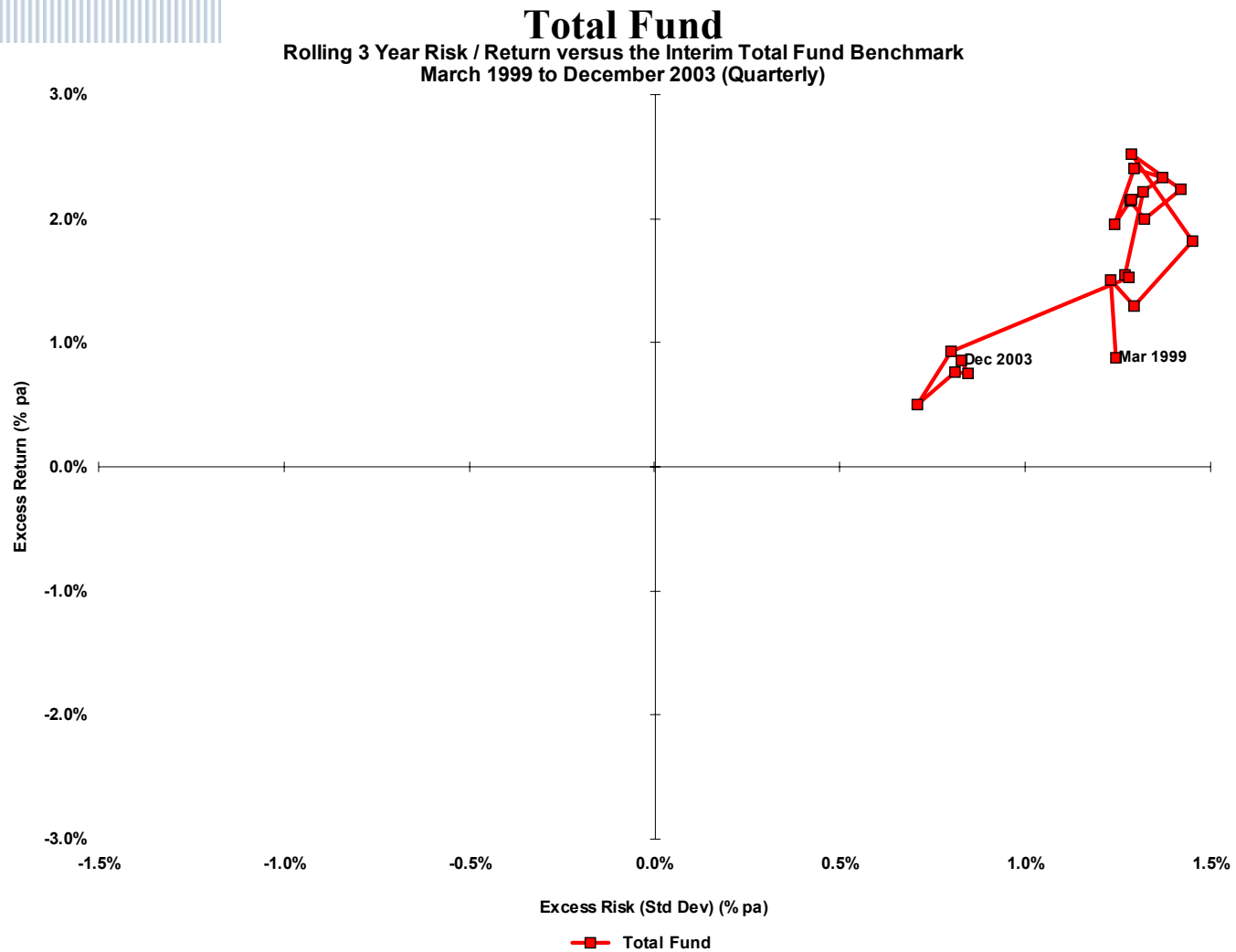
**Total Fund**  
Value of \$100 invested in US Balanced from Jan 1999 to Dec 2003



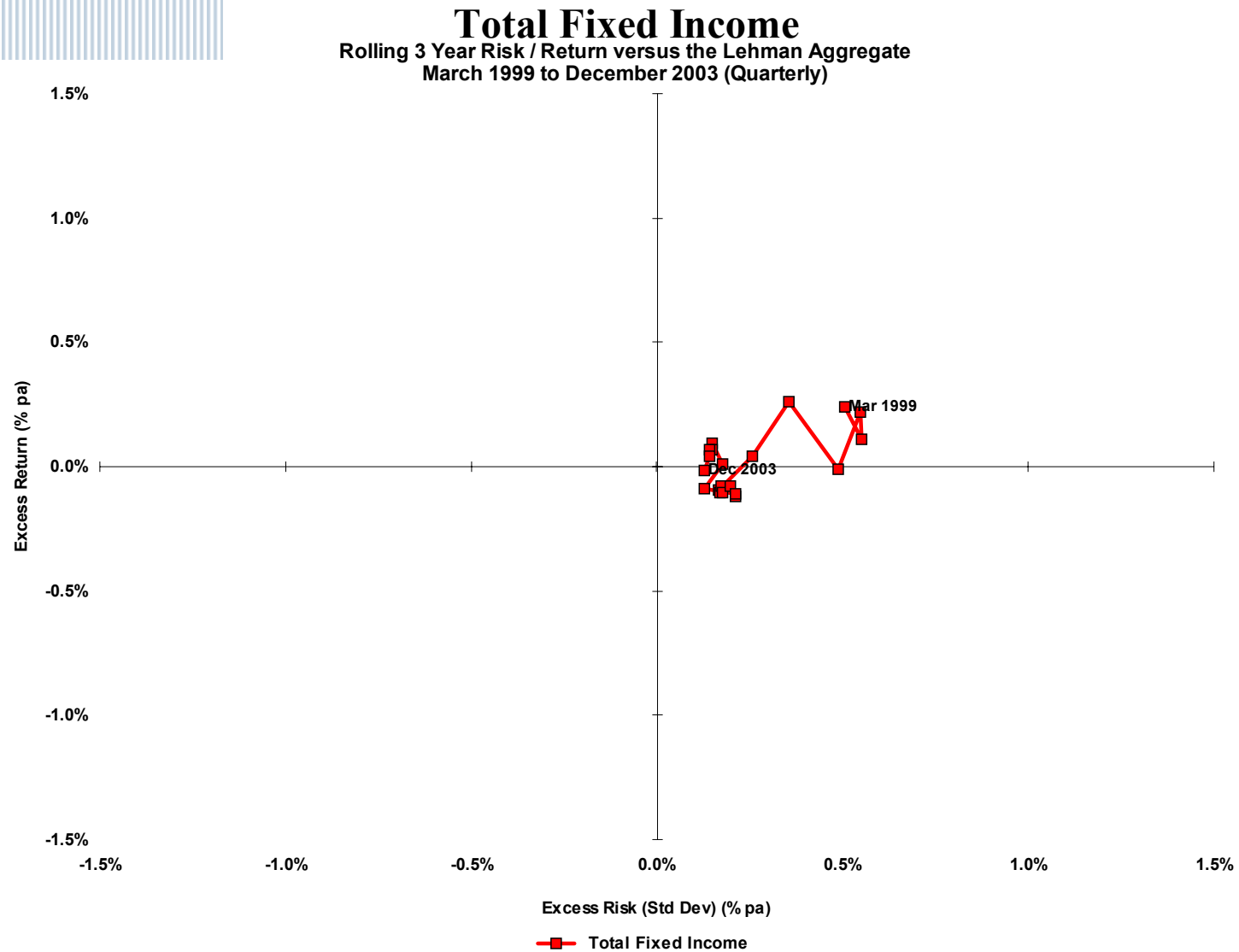
# Total Fund Return/Risk Analysis



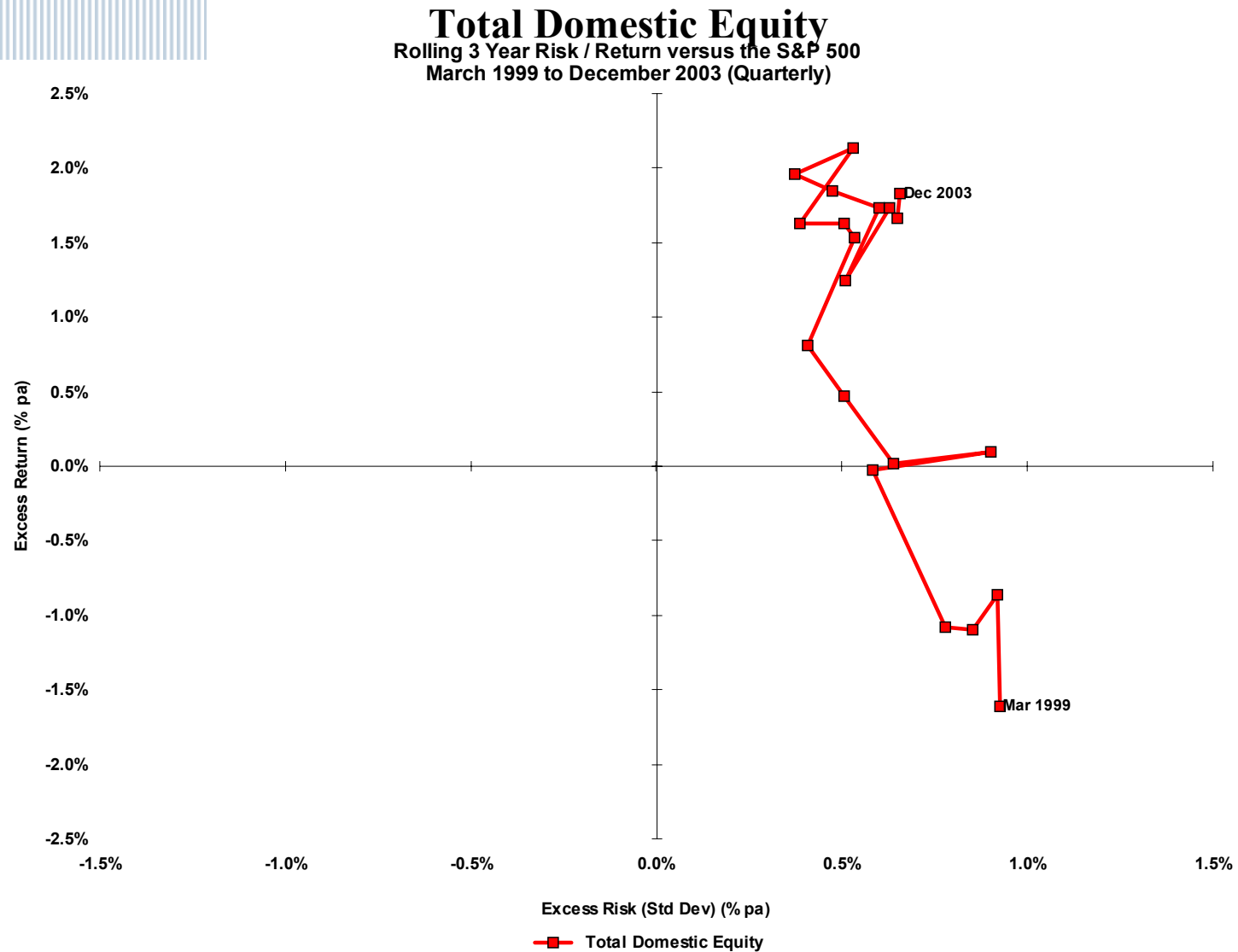
# Risk/Return Analysis



# Risk/Return Analysis

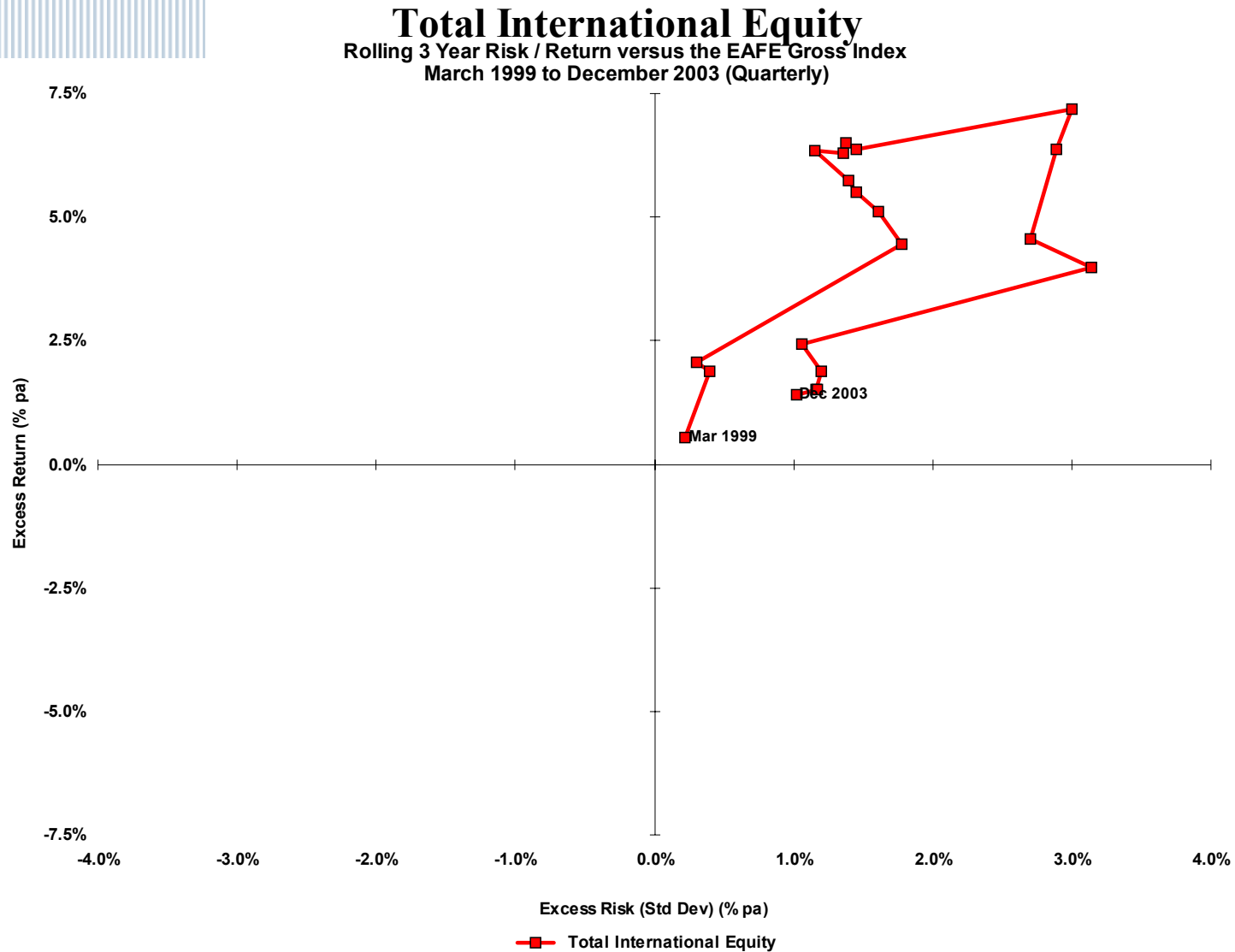


# Risk/Return Analysis





# Risk/Return Analysis



# Performance vs. Benchmarks

## For the 3 Years Ending December 31, 2003

	<u>Return</u>	<u>Assumed ROR</u>	<u>Std. Dev.</u>	<u>Assumed Std. Dev.</u>
Total Fund	1.1%	7.4%	16.3%	13.4%
Benchmark	0.2		15.3	
Domestic Fixed	7.6	4.5	3.7	6.0
LB Aggregate	7.6		3.6	
Domestic Equity	-2.2	8.5	23.7	18.6
S&P 500	-4.1		23.0	
Intl. Equity	-1.1	8.5	25.7	21.9
EAFE	-2.6		24.7	

# Performance vs. Benchmarks

## For the 5 Years Ending December 31, 2003

	<u>Return</u>	Assumed <u>ROR</u>	<u>Std. Dev.</u>	Assumed <u>Std. Dev.</u>
Total Fund	3.5%	7.4%	13.8%	13.4%
Benchmark	2.0		12.8	
Domestic Fixed	6.5	4.5	3.7	6.0
LB Aggregate	6.6		3.5	
Domestic Equity	1.0	8.5	20.2	18.6
S&P 500	-0.6		19.8	
Intl. Equity	4.9	8.5	22.7	21.9
EAFE	0.3		20.9	